DECODING NUMBERS AND SYMBOLS IN SAAMA GAANAMS.

Saama gaanam is chanted in singing style. Only the vowels of the text are used in singing with different pitches and elongations. The numbers and symbols are helplines for singing. We need not get scared by numerous numbers and symbols seen in the text of the saama gaanams. The numbers and symbols are only for uniform singing by a group of chanters.

1. Aim of this writing is to decode the digits and symbols seen in saama gaanams and to enable the reader to chant saamams easily.

2. In the study of samagaanams, first of all we should have the ability to identify the straight VOWELS and ASSOCIATED VOWELS present in the text of a samagana or saamam. Example. In इदामे ,इ is a straight vowel. In दा, आ is the associated vowel. In मे, ए is the associated Vowel

3. In samagana text every vowel must have a digit above that. But we don't see a digit on top of some of the vowels. They are hidden there. The hidden digit is the NP digit. (NP is the short form for NEAREST PREVIOUS .) Please remember the short form NP. We will be using this NP several times. The Nearest Previous digit may be in the line of mantra or on top of nearest previous vowel.

4. ZERO indicates extension. ZERO IS CALLED VRUDDHAM. We should understand that zero seen on top of a vowel is not a digit indicating pitch. It is only a symbol for pitch extension. There is no meaning for an independent zero in saamams. An independent zero becomes 10,20,30,40 or 50 by the zero taking the NP digit. So 10 is not the digit 10 but 1and symbol 0. Concerned Vowel (CV) of 10 is the vowel seen below 10 and that vowel is to be chanted in pitch 1 with extension for zero. Zero is a number used by some new publishers. In moolam book ,we will not see zero. Instead of zero, र will be printed. र is less confusing than zero. र is a symbol for extension of the vowel below that in the pitch associated withर. Example १र, २र, ३र, ४र, ५र .

5. The symbol s seen in the line of the text of a saamam is a SETU or a bridge . It has no sound , but there is a purpose. To indicate that NP vowel to s has to be chanted in more than one pitch to get the musical effect, it is not practical to print many digits on top of the same vowel. As a solution to this challenge, only one digit is printed on top of the vowel and then s is printed and then the remaining pitch numbers of that vowel are printed in the line of text .
Example. 2/पा s ३४५. Here 2 is on top of पा. So chanting of आ of पा should start in pitch 2 and then in p3, then p4, then p5. Though we are supposed to chant the vowel आ in different pitches, in practice , after पा the हा comes in the throat with different pitches in place of आ. So instead of पा आ आ आ in pitches (2,3,4,5) the chanting happens as पा हा हा हा in pitches(2,3,4,5).

6. When we see a number n inside bracket, (n), in line of the saamam, we should understand that we must chant the previous parkam n times. ex. (2) . (sentence between two stop marks is called a parkam),

7. When we see two numbers inside bracelet, say, m and n as, (m-n) in line of the saamam, we

should understand that we must chant the previous m parkams n times. Example (2-3)

8. The digits 1-6 are pitch levels of concerned vowels. *In saamams , Every digit should have a concerned vowel and every vowel should have a concerned digit*. In other words, an independent digit or an independent vowel has no meaning or place in saamams. In saamams 1 is the highest pitch and 6 is the lowest pitch of the CONCERNED VOWEL (CV). This is like 1st rank, 2nd rank,3rd rank, 4th rank,5th rank 6th rank. 10 is not 10th rank.10 indicates that, vowel below 10 is to be chanted in pitch1 with extension for zero in pitch 1. Similarly for 20,30,40,50. For the number seen on top of a vowel, the concerned vowel is below that. For numbers in line of the text , the concerned vowel is the NP VOWEL. For practicing pitches, assume that you are calling a person in the adjacent room by the vowel ओ in low sound of pitch 6 .When that person is not answering , you raise the pitch of ओ to 5, then to 4 ,then to 3, then to 2 then to 1. That is maximum. Now relax. IN SAAMAMS, DIGIT AND VOWEL ARE THE COUPLES WHO PRODUCE THE BABY CALLED SAAMA GAANA SOUND. Without the combination of vowel and digit there is no sound in saamams.

9. So pitch of a vowel in pitch 1 is greater than the pitch of a vowel in pitch 2. Similarly, pitchwise 1>2>3>4>5>6. (expand fully for all numbers in words and understand)

10. When we see more of 10,20,30,40,50 consecutively on top, pitch and extension effect are to be more expressive for the CV of end set only. Example. औहोवा with 50 onऔ, 50 on हो, 5 on वा) . As per the said rule we should apply the extension effect of zero more clearly to the हो only. So chanting will be औ,होहो,वा in pitch 5, notऔहो होहो वा in pitch 5. (Please note औ=अ+ओ . Example.सर्वौषधि = सर्व ओषधि)

11. When we see many numbers after sethu symbol then, CV for all those numbers is NP vowel of Sethu.

12. When we see 2 on a short vowel and the following syllable is simple then CV of2 is to be chanted in pitch 2 with 1 1/2 extension. For example, we see 2 on top of प followed by a simple syllable. Example. पदं (2,3 on top.)Then अ which is the short vowel of प should be chanted in pitch 2 with elongation as पा (1 1/2 extension of अ in pitch 2) but different from normal पा in pitch 2.. In short , short vowel with pitch 2 on top has to be chanted with 1 1/2 extension if the following syllable is a simple one. If the following syllable is a jodaksharam, then, normal pitch 2 without extension. Example. चक्रा (with 2,3 on top) will be chanted normally as चक्रा not as चाक्रा.

13. The upward looking half circle with a dot inside and a tail. If this symbol is in line of saamam then, the symbol should be chanted as ङ् This ङ् is saama gaana version for gm,ge, gg of krishna yajurveda. If the symbol is on top , it should be chanted as य् This य् is similar to krishna yajurveda . Example तचछं + योरा = तचच्छय्योरा in krishna yajurveda.

14. When we see two half circles , looking up and down, it is to be chanted as fp if the following syllable is प् and as hk if the following syllable is क्. This is the common rule of chanting any laukeeka or Vaideeka text in sanskrit. In other words, the two up and down half circles are the saama gaana symbol for the chanting of internal visarga followed by प् or क् in any sanskrit texts.

15. Double slash on digits 5 and 6 as (5" and 6") is to indicate 1 1/2 extension of the concerned vowel. This is to ensure that the chanting in lower pitches is somewhat audible.

16. Whenever a pitch change is indicated from 2 to 1 via sethu symbol s, the change of pitch of a LONG vowel from 2 to the higher pitch1 is a difficult one and so the CV is chanted with extra effort and elongation. This is called UTHDHAM. Example.२/सु २/लेs१. Here सु has 2 on top , ले has 2 on top, then s then 1 in line. The chanting is not सुलेहे,(2,2,1) but सुले,ए,हे where सु and ले are in pitch 2 , ए is in climbing pitch more than 2 and हे is in high pitch 1.

17. (स्थि) is not for chanting. It is short form for स्थिरा. It indicates that we should give a small pause while chanting. Example. In purusha sooktam, 2nd and 4th Saamam. Another symbol श्री: between two stop signals as ।। श्री: ।। is not for chanting.

18. . Now we look at finger movements related to pitches. Digit 1 is highest pitch voice for CV and 6 is the lowest. In an opened palm facing upwards, straight Thumb is for pitch 1 of CV, thumb on middle of index finger is for pitch2 of CV, thumb on the middle of middle finger is for pitch 3 of CV, thumb on the middle of ring finger is for pitch 4 of the CV, thumb on middle of little finger is for the pitch 5 of CV and thumb on the bottom of little finger is for the pitch 6 of CV. For practice, sing Aaa in all Six pitches one by one continously starting with straight thumb for Pitch 1, thumb touching Middle of index Number for pitch 2 etc till pitch 6. Do this one more time.

19. While using the finger movements for chanting, the hand and palm should be rock steady. So first of all we should decide where to fix the hand. If we are sitting on the floor, the hand can be on thigh level. If we are using a chair and a table, then the hand can be fixed at chest level on the table. Important thing is that we should have a comfortable fixed hand position while chanting saamams. After the hand is fixed, only the thumb should move as per the numbers and codes seen in the text.Finger positioning gives a signal to the mind to help the throat to pruduce the related pitch for the concerned vowel. This is clear by this time. Is it not. Yes. So if finger is moved carelessly and unnecessarily, the mind starts searching the corresponding vowel . When it is not getting a corresponding vowel , the mind gets confused and loses the training it had in finger -vowel-pitch co-ordination. In that case, again we will have to train the mind.So even if we see a stop mark, we should not change the thumb position . The thumb position will continue for the vowels in the next parkam also till we see a new number and its corresponding vowel or a combo .

20 /वि on top of a short syllable is a symbol called विनतं /

/न on top of a short syllable is a symbol called नमनं /

/अ on top of a short syllable is a symbol called अभिगीतं./

Knowledge of these names will not help chanting.

21. (वि)। (वि=1) विनतं . When we see वि on a short vowel, we should understand that it is 1 on a short vowel and we should chant that short vowel in pitch 1 with 1 1/2 extension.

(विनतं ,प्रथमादि द्वितीयान्तं, विनतं उच्चारण काले, तर्जनि मध्य अंगूष्ठ मध्य संयोगेन).
While chanting Vinatam, the index finger bends and the middle of the index finger comes in contact with middle of the thumb.

22. (न)। न=1,2. When we see न on a short vowel we should understand that न is (1and 2) on a short vowel. We should chant that short vowel in pitch 1, then in pitch 2 and the chanting moves to the next pitch which will be 3. (नमनं प्रथमः द्वितीयं अतिक्रामति।)

Finger wise thumb first touches the bottom of the index finger,carasses the index finger till top and then touches the middle of the middle finger (pitch3).
नमनं उच्चारण काले अंगुष्ठेन तर्जनीम् नमयित्वा, मध्यमाम् मध्य रेखायाम् अंगुष्ठ: पातनीय:।

23. (अ)। (अ=2) When we see अ on a short vowel , we should understand that it is 2 on a short vowel and we should chant that short vowel in pitch 2 with 1 1/2 extension, then in pitch 1

It is called अभिगीतं. अभिगीतं द्वितीयादि : प्रथमान्तं । अभिगीतं उच्चारण काले, तर्जनि अंगूष्ठाग्र संयोगेन। Abhigeetam is a case of pitch of a concerned short vowel moving from 2 to1. In normal 2to1 which we have already discussed, CV of 2 will be deergha. In Abhigeetam, CV of अ will be SHORT. In Abhigeetam, the index finger bends back and the tip of index finger touches the tip of thumb whereas in the normal case index finger bends back to touch the middle of thumb.

24. Bar on the 2 which is in line of samam is called PRAYANGAM. Let us call it as 2 Bar. There are two types of prayangams. The NP vowel to 2 bar will be in pitch1 or pitch 2. The two types are explained below.

Type1. If NP vowel to 2 bar is in pitch1 then, pitch variation of NP vowel to 2 bar will be from 1 to 5 to 1 to 2 very quickly. (Thumb movement is fast like an eagle).

Type2. If NP vowel to 2 bar is in pitch2 then, pitch variation of NP vowel to 2 bar will be from 2 to 5 to 1 to 2 very quickly. (Thumb movement is fast like an eagle).

25. When we see 2345 after sethu, it is called KARSHANAM. .While chanting the concerned vowel, the thumb moves through the middle of the concerned fingers .But when we See 2345 with 1 on top of 3 and 4 and 5, it is called SAMPRASAARYAM (SAMPRADAARYAM). For Sampradaryam, the thumb moves through the top of concerned fingers. Here what happens is that, in the second case, chanting takes fractionally more time than the first.

26. We can see another symbol which is an upward looking arrow ,^ , seen on top of a number or a syllable . This symbol is a *Smooth bowing symbol*. Technically this symbol is called PRANATAM (प्रणतं.) The pranatam symbol ,(^) , will be seen whenever pitch of a vowel is coming down from 1 to 2 , 2 to 3, 3 to 4 etc . The symbol tells us that the pitch of the concerned vowel should

be lowered smoothly and musically without a jerk. Example. In purusha sooktam, 1st Saamam, विष्णूऽ2 as (1,1ऽ2) with Pranatam symbol , ^, on 2. Here the marking indicates that pitch of the concerned vowel ऊ is to be chanted in decreasing pitches of 1 to 2 smoothly as vishnooohoo instead of vishnoohu.
Broadly speaking, they indicate 1½ extension for CV.

27. प on a syllable is called PAMPA. प implies that the vowel below that is to be chanted in 1½ pitch. Some books consider प silly and unnecessary and do not print प।

Till now we discussed the following points.
1. Aim
2. Vovels
3. Hidden digits
4. Zero
5. Sethu
6. Single digits in brackets
7. Two digits in brackets
8. Concerned vowel
9. Pitch levels of 1to6 and 10,20,30,40,50
10. Adjacent zeros
11. Sethu followed by many digits.
12. 2 on top
13. Half moon and dot.
14. Two half circles up and down
15. Double Slash symbol
16. Uthdham
17. स्थि and श्री
18. Finger mudras while chanting.
19. Steady hand and fingers
20. वि,न ,अ symbols, introduction.
21 to 23 वि,न ,अ symbols details
24. Prayangam
25. Samprasaaram and karshanam
26. Pranatam Symbol (^)
27. Pampa symbol.

28. As a theoretical matter, pitches 1 to 6 are called प्रथमः, द्वितीयः,तृतीयः, चतुर्थः, मन्द्रः , अतिस्वार्यम्.
To make a set of 7 as in musical notes, there is one more name called Krushta used in saamagana literature. This pitch is supposed to be a pitch which is louder than प्रथमः । Strangely there is no symbolic number for krushta. We can use zero as a symbol for krushta because zero is greater than 1 as per saamagana convention of 1st rank, 2nd rank etc. But we never see zero used anywhere in moolam books. The zero used in newer prints is VRUTDHAM to indicate extension as 10,20 etc and not for a note more than प्रथमः। To avoid this confution, Moolam books use the syllable र for

extension. So the conclusion is that the musical note krushta is not used in saaamagana even if the name exits for completing the set of seven pitches.

29.

सामगानस्य स्वरंवै त्रयोदशकं विख्यातं
कृष्ट प्रथम द्वितीयस्तृतीयश्चत्तुर्त्थम्मन्द्रः।।
अतिस्वार्यमिदं सप्त मन्यत्र स्वरं वै षष्टं
विनतं नमनम्मेवंचाभिगीतं तत् प्रयंगं
संप्रदार्यम् च प्रणतं तत्सर्वम् त्रयोदशकं।।

Saamagaana's swaram thirteen famous
Krushta,prathama,dwiteeya,thriteeya,chaturtham, mandra
Atiswaryam , now total seven, then swarams six more
Vinatam,Namanam, Abhigeetam, prayangam
Sampradaaryam,pranatam, grand total thirteen.

Read and understand all the 29 techniques one more time.

Now keep any Saama gaanam text in front of you. First just do the plain reading of the saamams without applying any decoding techniques as if you are reading an ordinary text. The audio is available in Shaivam.org. Keep the text in front of you and listen to the audio, chant with audio and go on noting down the starting time of every saamam from the time-line moving in computer while playing the audio. Any one devoting one hour per day should be able to complete noting down the starting time of every saamam in about three months' time. Sometimes, use finger movements also . This article and the audio are your 24x7 helpline . Chanting of first few saamams will be slow and difficult. Dont stop. Please continue your effort .Then speed will pickup. Happy chanting to all.

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26.5.2020